

PATENT ASSIGNMENT

Electronic Version v1.1
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SUBMISSION TYPE:	NEW ASSIGNMENT												
NATURE OF CONVEYANCE:	ASSIGNMENT												
CONVEYING PARTY DATA													
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Rahul Iyer</td> <td>06/25/2013</td> </tr> <tr> <td>Hai Qian</td> <td>06/25/2013</td> </tr> <tr> <td>Shengwen Yang</td> <td>06/25/2013</td> </tr> <tr> <td>Caleb E. Welton</td> <td>06/25/2013</td> </tr> </tbody> </table>		Name	Execution Date	Rahul Iyer	06/25/2013	Hai Qian	06/25/2013	Shengwen Yang	06/25/2013	Caleb E. Welton	06/25/2013		
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<table border="1"> <tr> <td>Name:</td> <td>EMC Corporation</td> </tr> <tr> <td>Street Address:</td> <td>176 South Street</td> </tr> <tr> <td>Internal Address:</td> <td>Office of General Counsel</td> </tr> <tr> <td>City:</td> <td>Hopkinton</td> </tr> <tr> <td>State/Country:</td> <td>MASSACHUSETTS</td> </tr> <tr> <td>Postal Code:</td> <td>01748</td> </tr> </table>		Name:	EMC Corporation	Street Address:	176 South Street	Internal Address:	Office of General Counsel	City:	Hopkinton	State/Country:	MASSACHUSETTS	Postal Code:	01748
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CORRESPONDENCE DATA													
<p>Fax Number: 6503262799 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: (650) 326-2701 Email: Byoung@young-iplaw.com Correspondent Name: Barry N. Young Address Line 1: P.O. Box 61197 Address Line 4: Palo Alto, CALIFORNIA 94306</p>													
ATTORNEY DOCKET NUMBER:	E003-1641US												
NAME OF SUBMITTER:	Barry N. Young												
Signature:	/Barry N. Young/												

OP \$40.00 13931876

Date:

06/30/2013

Total Attachments: 6

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ASSIGNMENT

WHEREAS, we, **Rahul Iyer, Hai Qian, Shengwen Yang and Caleb E. Welton** (Inventors/Assignors) have invented an invention comprising and/or embodying certain improvements or discoveries or both as described in an application for Letters Patent of the United States entitled

**A FRAMEWORK FOR CALCULATING GROUPED OPTIMIZATION
ALGORITHMS WITHIN A DISTRIBUTED DATA STORE**

the specification of which:

- ☐ [] is being executed on even date herewith and is about to be filed in the United States Patent Office;
- ☒ [X] was filed on **June 29, 2013** as **U.S. Application No. 13/931,876**;

WHEREAS, **EMC Corporation** (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the Commonwealth of Massachusetts and having a usual place of business at 176 South Street, Hopkinton, Massachusetts 01748 desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey to ASSIGNEE all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its

successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of substitution, reissue, divisional or continuation applications and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives,

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals as set forth below:

Date: June 25, 2013



Inventor's Signature

Print full name of first inventor:

Rahul Iyer

Residence:

US

Citizenship:

IN

Mailing Address:

714 Bounty Drive, Apt. 1406
Foster City, CA 94404


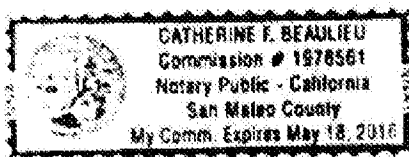
STATE OF California

COUNTY OF San Mateo

On this 25 day of June, 2013, before me appeared **Rahul Iyer** who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is ~~are~~ subscribed to the within instrument and acknowledged to me that he ~~she~~ ~~they~~ executed the same in his ~~her~~ ~~their~~ authorized capacity(ies), and that by his ~~her~~ ~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Notary Public

Print Name: Catherine F. Beaulieu

My Commission expires 05 / 18 / 16

Date: June 25, 2013

Hai Qian
Inventor's Signature

Print full name of second inventor:

Hai Qian

Residence:

US

Citizenship:

CN

Mailing Address:

**329 Laurie Meadows Dr., Apt. 109
San Mateo, CA 94403**

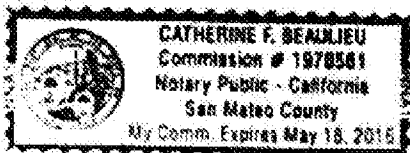
STATE OF California

COUNTY OF San Mateo

On this 25 day of June, 2013, before me appeared **Hai Qian** who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/~~she~~they executed the same in his/~~her~~their authorized capacity(ies), and that by his/~~her~~their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Catherine F. Beaulieu
Notary Public

Print Name: Catherine F. Beaulieu

My Commission expires 05 / 18 / 16

Date: June 25, 2013

Shengwen Yang

Inventor's Signature

Print full name of third inventor:

Shengwen Yang

Residence:

CN

Citizenship:

CN

Mailing Address:

Room 801, Building 7
Jin Dian Hua Yuan,
Haidian District,
Beijing 100082, China

Witnessed:

Tao Ma

Signature

Tao Ma

Printed Name

Witnessed:

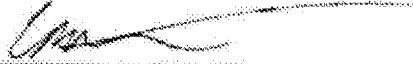
Lirong Jiao

Signature

Lirong Jiao

Printed Name

Date: June 25, 2013



Inventor's Signature

Print full name of second inventor:

Caleb E. Welton

Residence:

US

Citizenship:

US

Mailing Address:

**744 Edgewater Blvd. Apt. 301
Foster City, CA 94404**

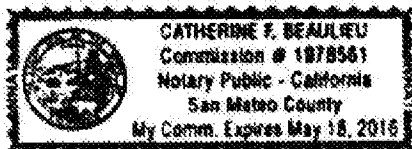
STATE OF California

COUNTY OF San Mateo

On this 25 day of June, 2013, before me appeared **Caleb E. Welton** who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(ies), and that by his/~~her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

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Notary Public

Print Name: Catherine F. Beaulieu

My Commission expires 05/18/16